

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Currently amended) A cooling system for cooling racks in a data center, said system comprising:

a cooling device for circulating cooling fluid in said data center, said cooling device including a fan and a variable capacity compressor;

a plenum having a plurality of returns and an outlet, wherein said outlet of said plenum is in fluid communication with said fan, wherein said plurality of returns are configured for removing said cooling fluid from said data center and are operable to vary a characteristic of said removal of cooling fluid through said returns; and

a cooling device controller operable to control at least one of a speed of said compressor and a speed of said fan, wherein the cooling device controller is operable to vary the speed of said fan to vary the removal of cooling fluid through the plurality of returns.

2. (Original) The system according to claim 1, wherein said characteristic of said cooling fluid comprises at least one of volume flow rate, velocity and direction of cooling fluid removal.

3. (Currently amended) The system according to claim 1, further comprising:
at least one return controller operable to control at least one of said plurality of returns, wherein said at least one return controller is configured to substantially independently control said plurality of returns to thereby substantially independently vary said characteristic of said cooling fluid removal.

4. (Currently amended) The system according to claim 3, further comprising:
a plurality of sensors configured to sense an environmental condition within said data center, said environmental condition including at least one of temperature, humidity, pressure, and cooling fluid flow rate, wherein said at least one return controller is configured to substantially independently control said plurality of returns in response to said measured environmental condition.

5. (Canceled).

6. (Currently amended) The system according to claim 3, ~~further comprising:~~
~~a variable capacity compressor; and~~
~~a cooling device controller operable to control the speed of said compressor and said speed of said fan to thereby vary said removal of said cooling fluid by~~ wherein said cooling device is operable to control at least one of the speed of the compressor and the speed of the fan in response to signals received from said at least one return controller.

7-11. (Canceled).

12. (Currently amended) A method of cooling a plurality of racks in a data center, said method comprising:
activating a cooling system having a fan and a variable capacity compressor; and
opening a plurality of returns, said plurality of returns being configured to remove cooling fluid from various locations of said data center;
sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range; ~~and~~

varying said removal of said cooling fluid from said racks through said plurality of returns in response to said sensed temperatures being outside said predetermined temperature range; and

varying a speed of the fan to vary said removal of said cooling fluid by said cooling device through said plurality of returns.

13-24. (Canceled)

25. (Currently amended) An apparatus for cooling a plurality of racks in a data center, said apparatus comprising:

means for activating a cooling system having a fan and a variable capacity compressor; ~~and~~

opening a plurality of returns, each of said plurality of returns being configured to remove cooling fluid from various locations of said data center;

means for sensing the temperatures of said racks;

means for determining whether said sensed temperatures are within a predetermined temperature range; ~~and~~

means for varying said removal of said cooling fluid from said racks through said plurality of returns in response to said sensed temperatures being outside said predetermined temperature range; and

means for varying a speed of the fan to vary said removal of said cooling fluid by said cooling device through said plurality of returns.

26-37. (Canceled).

38. (Currently amended) A computer readable medium on which is embedded computer software, said software comprising executable code for performing a method of cooling a plurality of racks in a data center, said method comprising:

activating a cooling system having a fan and a variable capacity compressor; and

opening a plurality of returns, each of said plurality of returns being configured to remove cooling fluid from various locations of said data center;

sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range; ~~and~~

varying said removal of said cooling fluid from said racks through said plurality of returns in response to said sensed temperatures being outside said predetermined temperature range; and

varying a speed of the fan to vary said removal of said cooling fluid by said cooling device through said plurality of returns.

39-50. (Canceled).

51. (New) The system according to claim 4, wherein said plurality of sensors are configured to sense an environmental condition in locations outside of the plurality of racks and wherein the at least one controller is configured to substantially independently control said plurality of returns in response to said measured environmental condition out side of the racks.

52. (New) The system according to claim 1, wherein the plurality of returns includes fans configured to draw cooling fluid from the data center.

53. (New) The system according to claim 52, wherein the fans are movable, wherein a direction of cooling fluid removal is variable through movement of the fans.

54. (New) The system according to claim 1, wherein the plurality of returns are independent of the racks.

55. (New) The system according to claim 1, wherein the cooling device controller is operable to vary the speed of said compressor to vary a temperature of the cooling fluid delivered to the racks.

56. (New) The system according to claim 1, wherein the cooling device controller is operable to vary the speed of the fan to vary a volume flow rate of cooling fluid delivered to the racks.

57. (New) The method according to claim 12, wherein the step of varying said removal of said cooling fluid from said racks comprises varying the direction of removal of said cooling fluid.

58. (New) The method according to claim 12, wherein the step of varying said removal of said cooling fluid from said racks comprises substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

59. (New) The method according to claim 12, further comprising:
varying a speed of the compressor to vary a temperature of the cooling fluid delivered to the racks.

60. (New) The method according to claim 12, further comprising:
varying the speed of the fan to vary a volume flow rate of cooling fluid delivered to the racks.

61. (New) The apparatus according to claim 25, wherein the various locations of said data center comprises a plurality of racks.

62. (New) The apparatus according to claim 25, wherein the means for varying said removal of said cooling fluid from said racks comprises means for varying the direction of said removal of said cooling fluid.

63. (New) The apparatus according to claim 25, wherein the means for varying said removal of said cooling fluid from said racks comprises means for substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

64. (New) The apparatus according to claim 25, further comprising:
varying a speed of the compressor to vary a temperature of the cooling fluid delivered to the racks.

65 (New) The apparatus according to claim 25, further comprising:
means for varying the speed of the fan to vary a volume flow rate of cooling fluid delivered to the racks.

66. (New) The computer readable medium according to claim 38, wherein the various locations of said data center comprises a plurality of racks.

67. (New) The computer readable medium according to claim 38, further comprising:
varying the direction of removal of said cooling fluid.

68. (New) The computer readable medium according to claim 38, further comprising:
substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

69. (New) The computer readable medium according to claim 38, further comprising:
varying a speed of the compressor to vary a temperature of the cooling fluid delivered to the racks.

70. (New) The computer readable medium according to claim 69, further comprising:

varying the speed of the fan to vary a volume flow rate of cooling fluid delivered to the racks.